Application Number: 10/661,564
Filing Date: September 15, 2003

Attorney Docket Number: 03180.0333

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

1. Please amend the paragraph beginning on page 9, line 8, as follows:

As shown in Fig. 1, an annealing furnace according to a first embodiment of the present invention includes a processing chamber 11, a susceptor 12, an introduction conduit 17, an exhaust conduit 18, a transparent window 15 and a main heater 36. Herein, a substrate 1 such as a semiconductor substrate is processed in the processing chamber 11. The susceptor 12, on which the substrate 1 is loaded, is located in the processing chamber 11. The introduction conduit 17 supplies gas in parallel to the surface of the substrate 1. The exhaust conduit 18 exhausts gas from the processing chamber 11. The transparent window 15 is located facing the susceptor 12 on the top of the processing chamber 11. The main heater 36 irradiates the surface of the substrate 1 from the transparent window 15 with pulsed light.

2. Please amend the paragraph beginning on page 17, line 16, and ending on page 18, line 26, as follows:

As shown in Fig. 7, the first processing apparatus 21 includes the first processing chamber 11a, a first susceptor 12a, the first introduction conduit 17a, the first exhaust conduit 18a, a first transparent window 15a, and a first main heater 36a. Herein, the substrate 1 is subjected to the first surface processing in the first processing chamber 11a. The first susceptor 12a, on which the substrate 1 is loaded, is located in the first processing chamber 11a. The first introduction conduit 17a supplies gas in parallel to the surface of the substrate 1. The first exhaust conduit 18a exhausts gas from the first processing chamber 11a. The first transparent

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window 15a is located on top of the first processing chamber 11a, facing the first susceptor 12a. The first main heater 36a irradiates the surface of the substrate 1 with light from the first transparent window 15a. As shown in Fig. 8, the second processing apparatus 22 includes the second processing chamber 11b, a second susceptor 12b, the second introduction conduit 17b, the second exhaust conduit 18b, a second transparent window 15b, and a second main heater 36b. Herein, the substrate 1 is subjected to a second surface processing in the second processing chamber 11b. The susceptor 12b, on which the substrate 1 is loaded, is located in the second processing chamber 11b. The second introduction conduit 17b supplies gas in parallel to the surface of the substrate 1. The second introduction conduit 17b supplies gas to the surface of the substrate 1. The second exhaust conduit 18b exhausts gas from the second processing chamber 11b. The second transparent window 15b is located on the top of the second processing chamber 11b, facing the second susceptor 12b. The second main heater 36b irradiates the surface of the substrate 1 with light from the second transparent window 15b. Thus, the first and second processing apparatuses 21 and 22 used in the second embodiment have the same construction as those of the first embodiment. Therefore, redundant descriptions will be omitted.

3. Please amend the paragraph beginning on page 23, line 1, as follows:

As shown in the Fig. 12, in a method of forming an insulating film according to a first modification of the second embodiment of the present invention, an insulating film is formed by positioning a stencil mask 9 made of Si, silicon carbide (SiC) or the like [[on]] above a substrate 1 and irradiating with flash lamp light FL and FLm. The flash lamp light FLm, which irradiates portion other than an opening 9a of the stencil mask 9, does not transmit onto the substrate 1. Meanwhile, the flash lamp light FL, which irradiates the opening 9a, can transmit so as to heat

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locally a portion corresponding to the opening 9a of the substrate 1 loaded on the susceptor 12.

For example, the substrate 1 is irradiated through the opening 9a by the flash lamp light FL to be

heated to approximately 1050 °C while oxidation gas flows, and thus, an insulating film 6 which

is a thermal oxide film is selectively formed. By use of the stencil mask 9, the first modification

of the second embodiment differs from the second embodiment in that an ultra insulating film 6

is selectively formed on a region corresponding to the opening 9a of the stencil mask 9. Other

than that, the first modification of the second embodiment is of the same as the second

embodiment, and redundant description will be omitted.

4. Please amend the paragraph beginning on page 24, line 20, as follows:

(1) First, as shown in Fig. 13, the Si substrate 1, in which isolation insulating films 8a to

8d are formed, and the stencil mask 9 are loaded in the first processing chamber 11a shown in

Fig. 6. The stencil mask 9 is positioned [[on]] above an upper side of the Si substrate 1. The

opening 9a of the stencil mask 9 is aligned with a region in which a thick insulating film is

formed, for example, a region between the isolation insulating films 8b and 8c.

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